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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,557	11/14/2003	Martin Stahl	13913-173US1 / 2001P00015	1730
32864 7590 12/31/2007 FISH & RICHARDSON, P.C. PO BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER HWANG, JOON H	
			ART UNIT 2166	PAPER NUMBER
			MAIL DATE 12/31/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/714,557

Applicant(s)

STAHL ET AL.

Examiner

Joon H. Hwang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The applicants requested for reconsideration in the amendment filed on 10/12/07.  
The claims 1-22 are pending.

### *Response to Arguments*

2. Applicant's arguments filed on 10/12/07 have been fully considered but they are not persuasive.

A. The applicants argue that Griffin and Yoda failed to disclose "storing representations, for at least one entry in the source table, of the action type and of the unique key in a log table under a condition that the action type coincides with a predetermined action type."

The examiner respectfully traverses.

The AdminDB 20 in Griffin is not limited to receiving only update transactions. Griffin teaches the AdminDB 20 may also receive read transactions (lines 17-23 in col. 6). Therefore, possible actions types taught by Griffin are add, delete, update, and read. The deltas include add, delete, and update actions (lines 24-36 in col. 11) among such possible actions types. Thus, the condition for storing the deltas would be the action type coincides with add, delete, or update action type. Therefore, such limitation is taught by Griffin.

Griffin teaches the transaction and the underlying view definition are analyzed to produce a delta, wherein the transaction is an update, insert, or delete transaction (lines 64-11 in cols. 3-4 and lines 66-5 in cols. 6-7). Thus, when a transaction is performed,

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action type is already known. Therefore, the applicants' argument, the action types "+", "-", and "mod" do not exist until the deltas are generated, is not persuasive.

It is a well settled rule that a reference must be considered not only for what it expressly teaches, but also for what it fairly suggests. See *In re Burckel*, 592 F.2d 1175, 201 USPQ 67 (CCPA 1979) and *In re Lamberti*, 545 F.2d 747, 192 USPQ 278 (CCPA 1976) as well as *In re Bode*, 550 F.2d 656, 193 USPQ (CCPA 1977) which indicates such fair suggestions to unpreferred embodiments must be considered even if they were not illustrated. Additionally, it is an equally well settled rule that what a reference can be said to fairly suggest relates to the concepts fairly contained therein, and is not limited by the specific structure chosen to illustrate such concepts. See *In re Bascom*, 230 F.2d 612, 109 USPQ 98 (CCPA 1956).

For the sake of the applicants' argument, it is assumed that Griffin does not explicitly disclose "storing representations, for at least one entry in the source table, of the action type and of the unique key in a log table under a condition that the action type coincides with a predetermined action type".

However, Yoda teaches storing representations (i.e., journaling, lines 44-46 in col. 3), for at least one entry in the source table (i.e., a document in the document storage section 22 in fig. 1, fig. 3, and lines 21-27 in col. 10), of the action type and of the unique key (i.e., TYPE and DOCUMENT ID, lines 12-19 in col. 12, wherein TYPE and DOCUMENT ID are identified from a document operation) in a log table (i.e., a journal, fig. 5 and lines 53-59 in col. 10) under a condition that the action type coincides with a predetermined action type (i.e., a specified operation type, for example, " \* " for all

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operation types, lines 1-6 in col. 18) in order to monitor specific data operations.

Therefore, based on Griffin in view of Yoda, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teaching of Yoda to the system of Griffin in order to monitor specific data operations.

"Test of obviousness is not whether features of secondary reference may be bodily incorporated into primary reference's structure, nor whether claimed invention is expressly suggested in any one or all of references; rather, **test is what combined teachings of references would have suggested to those of ordinary skill in art.**" In re Keller, Terry, and Davies, 208 USPQ 871 (CCPA 1981).

"Reason, suggestion, or **motivation to combine two or more prior art references** in single invention **may come from references themselves**, from **knowledge of those skilled in art** that certain references or disclosures in references are known to be of interest in particular field, or from **nature of problem to be solved;**" Pro-Mold and Tool Co. v. Great Lakes Plastics Inc. U.S. Court of Appeals Federal Circuit 37 USPQ2d 1626 Decided February 7, 1996 Nos. 95-1171, -1181.

"Prima facie case of obviousness is established when **teachings of prior art appear to suggest claimed subject matter to person of ordinary skill in art;** it is incumbent upon applicant to go forward with objective evidence of unobviousness once prima facie case is established." In re Rinehart (CCPA) 189 USPQ 143 Decided Mar. 11, 1976 No. 75-608 U.S. Court of Customs and Patent Appeals.

Therefore, the applicants' arguments are not persuasive.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 5-10, and 14-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin et al. (U.S. Patent No. 6,006,216) in view of Yoda et al. (U.S. Patent No. 6,119,117).

With respect to claim 1, Griffin teaches migrating content from a source table in a source database to a target table in a target database, wherein the databases are physically different (i.e., migrating content from AdminDB to ReadDB, wherein AdminDB utilizes normalized schema and ReadDB utilizes unnormalized schema, and AdminDB and ReadDB reside on different platforms, fig. 2, lines 32-45 in col. 6, and lines 22-39 in col. 7). Griffin teaches storing entries corresponding to database instructions in at least one of the source table and the target table, with a business application consecutively sending database instructions to the source database before migrating, the business application consecutively sending database instructions to the target database after migrating, each entry in each table having a unique key, and the database instructions having action types (line 64 in col. 3 thru line 11 in col. 4, line 7 in col. 6 thru line 8 in col. 7, fig. 2, fig. 10, and fig. 14). Griffin teaches storing representations, for at least one entry in the source table, of the action type and of the unique key in a log table under

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the condition that the action type coincides with a predetermined action type (i.e., generation of delta, line 64 in col. 3 thru line 11 in col. 4, line 7 in col. 6 thru line 8 in col. 7, fig. 2, fig. 10, and fig. 14; wherein the deltas may be any of various different forms as in the prior art, lines 63-64 in col. 6, which teaches the deltas can be in form of a table as well known in the art (i.e., information is structured in tables), line 52 in col. 3; the deltas teach a log of changes, line 64 in col. 3 thru line 11 in col. 4 and lines 1-3 in col. 7; an action type in the delta (i.e., "+" for add, "-" for delete, and "mod" for update), lines 24-36 in col. 11; a unique key in the delta (i.e., tuples including ID key, such as item 103 in fig. 10), lines 24-36 in col. 11 and fig. 14; the deltas include update transactions, such as add, delete, and update, lines 24-36 in col. 11, thus the condition would be every update transactions). Griffin teaches copying entries of the source table to the target table (line 64 in col. 3 thru line 11 in col. 4, line 7 in col. 6 thru line 8 in col. 7, fig. 2, fig. 10, and fig. 14). Griffin teaches adjusting the entries in the target table that have keys represented in the log table according to the action type representation stored in the log table (i.e., entries in ReadDB table are copied and adjusted, line 64 in col. 3 thru line 11 in col. 4, line 7 in col. 6 thru line 8 in col. 7, fig. 2, fig. 10, and fig. 14). Yoda also teaches storing representations of the action type and of the unique key in a log table under the condition that the action type coincides with a predetermined action type (i.e., specifying an operation type to be targeted to selectively acquire the journal of operations, lines 44-46 in col. 3, lines 12-19 in col. 12, and lines 1-6 in col. 18) in order to monitor specific data operations. Therefore, based on Griffin in view of Yoda, it would have been obvious to one having ordinary skill in the art at the time the invention

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was made to utilize the teaching of Yoda to the system of Griffin in order to monitor specific data operations.

With respect to claim 5, Griffin teaches adjusting the entries is performed in a first adjustment period while the application is sending database instructions and in a second adjustment period while the application is not sending database instructions (line 52 in col. 6 thru line 8 in col. 7).

With respect to claim 6, Griffin teaches the predetermined action types are selected from the group consisting of insert, delete, and update (line 52 in col. 6 thru line 8 in col. 7).

With respect to claim 7, Griffin teaches the database instructions are SQL statements (lines 11-25 in col. 10).

With respect to claim 8, Griffin teaches adjusting the entries comprises adjusting a first portion of the source table with a first portion of the target table substantially in parallel with adjusting a second portion of the source table with a second portion of the target table (i.e., handling multiple transactions concurrently, lines 31-35 in col. 1 and line 52 in col. 6 thru line 8 in col. 7).

With respect to claim 9, Griffin teaches copying entries comprises copying a first portion of the source table to a first portion of the target table substantially in parallel with copying a second portion of the source table to a second portion of the target table (i.e., handling multiple transactions concurrently, lines 31-35 in col. 1 and line 52 in col. 6 thru line 8 in col. 7).



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The limitations of claims 10, 19, and 22 are rejected in the analysis of claim 1 above, and these claims are rejected on that basis.

The limitations of claims 14 and 20 are rejected in the analysis of claim 5 above, and these claims are rejected on that basis.

The limitations of claim 15 are rejected in the analysis of claim 6 above, and the claim is rejected on that basis.

The limitations of claim 16 are rejected in the analysis of claim 7 above, and the claim is rejected on that basis.

The limitations of claims 17 and 21 are rejected in the analysis of claim 8 above, and these claims are rejected on that basis.

The limitations of claim 18 are rejected in the analysis of claim 9 above, and the claim is rejected on that basis.

5. Claims 2-4 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin et al. (U.S. Patent No. 6,006,216) in view of Yoda et al. (U.S. Patent No. 6,119,117), and further in view of Nowlin, Jr. et al. (U.S. Patent No. 6,484,309).

With respect to claims 2-4, Griffin and Yoda disclose the claimed subject matter as discussed above except converting the coding of the entry. However, Nowlin teaches converting the coding of data from ASCII-code to Unicode (lines 19-33 in col. 3 and lines 42-51 in col. 4) in order to transfer the data to a system that uses only Unicode strings which are 16 bits per character. Therefore, based on Griffin in view of Yoda, and further in view of Nowlin, it would have been obvious to one having ordinary

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skill in the art at the time the invention was made to utilize the teaching of Nowlin to the system of Griffin in order to transfer the data to a system that uses only Unicode strings which are 16 bits per character.

The limitations of claims 11-13 are rejected in the analysis of claims 2-4 above, and these claims are rejected on that basis.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joon H. Hwang whose telephone number is 571-272-4036. The examiner can normally be reached on 9:30-6:00(M~F).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Joon Hwang', is written over a horizontal line.

Joon Hwang  
Patent Examiner  
Technology Center 2100

12/21/2007